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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

GOLINKOFF, JORDAN

ART UNIT	PAPER NUMBER
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2174

6

DATE MAILED: 03/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/839,438

Applicant(s)

PANKOVICIN, IGOR

Examiner

Jordan S Golinkoff

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is responsive to Amendment A, filed 3/2/2004.
2. Claims 1-26 are pending in this application. Claims 1, 14, 18 and 26 are independent claims. In the Amendment A, claims 1, 14, and 24 were amended. This action is made Final.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

4. Claims 1-5, 12-17, and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Wanderski (US006147687A).

As per claim 1, Wanderski teaches a method for presenting categorized information on a computer-enabled user interface, the method comprising:

- a. displaying one or more categories for the categorized information (column 5, lines 18-22).
- b. receiving a user selection of a category of the one or more categories (column 9, lines 21-25).
- c. independently retrieving data associated with the selected category so that the displayed categories remain responsive to user interaction while the data is being retrieved (column 8, lines 2-8 and column 9, lines 46-49).

As per claim 2, which is dependent on claim 1, Wanderski teaches placing a request for retrieval of the data in a queue; and processing the request from the queue asynchronously with respect to the displaying step (Column 8, lines 54-55 and column 10, lines 38-40).

As per claim 3, which is dependent on claim 1, Wanderski teaches receiving a user request for cancellation of the data retrieval; and, in response to the user request, canceling the data retrieval (column 10, lines 4-6, *requests can be viewed as objects in the data structure and deleted by the user*).

As per claim 4, which is dependent on claim 1, Wanderski teaches that the selected category is one of a plurality of categories selected by the user, and the method further comprises: receiving a user request to boost the priority of at least one selected category; and, in response to receiving the user request, boosting the priority of the at least one selected category (column 10, lines 4-6, *requests can be viewed as objects in the data structure and moved by the user thereby changing their priority*).

As per claim 5, which is dependent on claim 1, Wanderski teaches a computer-readable medium having stored thereon computer-executable instructions for performing the method of claim 1 (column 6, lines 14-15).

Claims 17 and 23 are similar in scope to claim 5, and are therefore rejected under similar rationale.

As per claim 12, which is dependent on claim 1, Wanderski teaches that the categories are displayed as nodes of a graphical hierarchy (column 5, lines 18-23).

Claim 15 is similar in scope to claim 12, and is therefore rejected under similar rationale.

As per claim 13, which is dependent on claim 12, Wanderski teaches that the graphical hierarchy is a tree (column 5, lines 18-23).

Claim 16 is similar in scope to claim 13, and is therefore rejected under similar rationale.

As per claim 14, Wanderski teaches a computer-implemented method for displaying a plurality of categories, the method comprising:

- a. displaying a populated portion of the plurality of categories on a screen (figure 3C).
- b. displaying a placeholder to represent an unpopulated portion of the plurality of categories, wherein the placeholder indicates to the user a retrieval status of the data required to populate the unpopulated portion (column 9, lines 9-20 and column 10, lines 10-13, *the retrieval status of pending updates are indicated*).

Claim Rejections - 35 USC § 103

5. Claims 6-9, 11, 18-21, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wanderski (US006147687A).

As per claim 6, which is dependent on claim 1, Wanderski teaches that the displaying step is performed by a main thread and the retrieving step is performed by a worker thread executing asynchronously with respect to the main thread (column 10, lines 44-48 and column 9, lines 52-55). Wanderski discloses the use of multiple threads executing asynchronously to process an update on a data structure while remaining responsive to user input. However, Wanderski does not explicitly disclose a worker thread retrieving the data while the main thread displays the data. Although Wanderski does not expressly teach these features, Official Notice is given that it is notoriously well known in the art to use multiple threads executing asynchronously to perform tasks on a computer. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use multiple threads executing

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asynchronously to allow the user to interact with the data structure while search and retrieval functions are executing asynchronously.

As per claim 7, which is dependent on claim 6, Wanderski teaches that when the worker thread has finished retrieving the data, it notifies the main thread that the data is available (column 10-11, lines 65-1, *control is transferred after updates and retrievals are complete*). As mentioned above, Wanderski discloses the use of multiple threads executing asynchronously to process an update on a data structure while remaining responsive to user input. However, Wanderski does not explicitly disclose the worker thread notifying the main thread upon its completion of retrieving the requested data. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the multiple threads executing asynchronously to communicate to allow the user interface to indicate changes of state as the search proceeds.

As per claim 8, which is dependent on claim 6, Wanderski teaches that the worker thread places the retrieved data in a cache, the main thread accesses the data from the cache and displays the data (column 12, lines 3-7, *it is known that a cache is a type of short term memory buffer*). Although Wanderski does not explicitly mention the worker thread and the main thread placing and retrieving data in a cache, Wanderski does mention the use of a cache to store pending updates (column 9, lines 28-29). Official notice is given that the use of a cache as short term memory used to store frequently accessed data is notoriously well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a cache to store and retrieve data that would be frequently used in order to reduce the processing time required to display and update a data structure.

As per claim 9, which is dependent on claim 1, Wanderski teaches that the retrieved data is stored in a cache, the method further comprising obtaining the data from the cache for display on a user interface (column 9, lines 28-29 and column 12, lines 3-7, *it is known that a cache is a type of short term memory buffer*). The obviousness of the limitation of storing, retrieving, and displaying data from a cache has been addressed above in claim 8.

As per claim 11, which is dependent on claim 9, Wanderski teaches receiving a user request to display a partially retrieved portion of the data; in response to the user request, obtaining the partially retrieved portion from the cache; and displaying the partially retrieved portion of the data (column 10, lines 20-26). The obviousness of the limitation of storing, retrieving, and displaying data from a cache has been addressed above in claim 8.

As per claim 18, Wanderski teaches a computer-implemented method for presenting data, the method comprising:

- a. executing a first thread for displaying a graphical hierarchy having one or more nodes (column 4, lines 53-57, *presentation of the view*).
- b. executing, independently of the first thread, a second thread of execution for retrieving data associated with at least one of the one or more nodes (column 4, lines 53-57, *thread for the update process*).

The obviousness of the limitation of using multiple threads asynchronously to retrieve and display data has been addressed above in claim 6.

As per claim 19, which is dependent on claim 18, Wanderski teaches that the second thread retrieves data for populating the hierarchy (column 9, lines 52-55). The obviousness of

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the limitation of using multiple threads asynchronously to retrieve and display data has been addressed above in claim 6.

As per claim 20, which is dependent on claim 18, Wanderski teaches receiving a user selection of a node of the one or more nodes, wherein the second thread retrieves data associated with the selected node (column 9, lines 52-55). The obviousness of the limitation of using multiple threads asynchronously to retrieve and display data has been addressed above in claim 6.

As per claim 21, which is dependent on claim 20, Wanderski teaches displaying the retrieved data on a computer screen adjacent to the hierarchy (column 6, line 10).

As per claim 26, Wanderski teaches a system for presenting categorized information on a computer-enabled user interface, the system comprising:

- a. a user interface for receiving a user selection of at least one category of information (column 6, lines 4-10).
- b. a means for executing a main thread for requesting the retrieval of data associated with the selected category (column 4, lines 53-57).
- c. a cache that is accessible to the main thread (column 12, lines 3-7, *it is known that a cache is a type of short term memory buffer*).
- d. a means for executing a worker thread for retrieving the requested data and storing it in the cache column 12, lines 3-7, *it is known that a cache is a type of short term memory buffer*).

Wanderski discloses the use of multiple threads executing asynchronously to process an update on a data structure while remaining responsive to user input. However, Wanderski does

not explicitly disclose a worker thread retrieving the data while the main thread displays the data. Although Wanderski does not expressly teach these features, Official notice is given that it is notoriously well known in the art to use multiple threads executing asynchronously to perform tasks on a computer. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use multiple threads executing asynchronously, as taught by Wanderski, to allow the user to interact with the data structure while search and retrieval functions are executing asynchronously.

Furthermore, Wanderski does not explicitly mention the worker thread and the main thread placing and retrieving data in a cache, Wanderski does mention the use of a cache to store pending updates (column 9, lines 28-29). Official notice is given that the use of a cache as short term memory used to store frequently accessed data is notoriously well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a cache to store and retrieve data that would be frequently used in order to reduce the processing time required to display and update a data structure.

6. Claims 22, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wanderski (US006147687A) in view of Brozowski et al. ("Brozowski", US006559871B1).

As per claim 22, which is dependent on claim 20, Wanderski teaches receiving a user selection of a node of the one or more nodes, wherein the second thread retrieves data associated with the selected node (column 9, lines 52-55). Wanderski does not disclose displaying the retrieved data on a computer screen in one pane and displaying the hierarchy on another. Brozowski teaches that it is known to display retrieved data in a split pane window setup (figure 10C). It would have been obvious to one of ordinary skill in the art at the time the invention was

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made to combine a multithreaded method of selecting and receiving data in a tree hierarchy, as taught by Wanderski, with a method to display retrieved contents of a hierarchy in an adjacent pane, as taught Brozowski, in order to display a greater amount of information in one window.

As per claim 24, which is dependent on claim 18, Wanderski teaches a method to retrieve and display data using more than one thread (column 9, lines 52-55). Wanderski does not disclose that the second thread retrieves data based on an assumption as to whether the user wishes to have the data retrieved, without an explicit selection by the user. Brozowski teaches that it is known to automatically retrieve data without explicit user instructions (column 15, lines 35-44). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine a method to retrieve and display data using more than one thread, as taught by Wanderski, with a method to automatically retrieve data without explicit user instructions, as taught by Brozowski, in order reduce or eliminate the delay of loading new information into the display.

As per claim 25, which is dependent on claim 18, Wanderski teaches a method to retrieve and display data using more than one thread (column 9, lines 52-55). Wanderski does not disclose that the second thread retrieves data based on which nodes have been frequently selected by the user. Brozowski teaches that it is known to use past usage data to predict future selections by the user and to automatically open nodes that correspond to these predictions (column 15, lines 50-63). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a method to use past usage history to automatically populate and open nodes, as taught by Brozowski, with a method to retrieve and display data using more than

one thread, in order to anticipate the user's requests and thereby enhance the graphical user interface by reducing or eliminating delayed loading of information.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wanderski (US006147687A) in view of Bannon et al. ("Bannon", US006047357A).

As per claim 10, which is dependent on claim 9, Wanderski teaches that the retrieved data is stored in a cache, the method further comprising obtaining the data from the cache for display on a user interface (column 9, lines 28-29 and column 12, lines 3-7, *it is known that a cache is a type of short term memory buffer*). Wanderski does not disclose receiving a user request to refresh the display of the data; and, in response to the user request, marking the data in the cache as dirty. Bannon teaches that it is known to mark a cache to indicate a change of state (column 5, lines 62-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a method to mark the cache to indicate a change of state, as taught by Bannon, with a method to store retrieved data in a cache and display data from this cache, in order to indicate a change of state and the need to alter the display of the changed information.

Response to Arguments

8. Applicant's arguments, filed 3/2/2004, regarding claims 1, 6, 14, 18, and 26 have been fully considered but they are not persuasive.

Applicant argued the following:

a. Wanderski does not relate to the retrieval of categorized information;

- b. Wanderski fails to disclose the step of displaying a placeholder wherein the placeholder indicates to the user a retrieval status of the data required to populate the unpopulated portion;
- c. Wanderski fails to disclose a separate thread for retrieving data.

To begin, Applicants arguments appear to be contradictory. On the bottom of page 12, applicant states that Wanderski discloses that the user cannot interact with the tree view until all the information is retrieved about the tree and the tree view is nonresponsive until all the nodes and elements of the tree structure have been retrieved. Yet, on the top of page 13, applicant states that Wanderski discloses nothing more than a way to allow the tree view to be responsive while the data structure of the tree is being changed or generated. The reference cannot teach both non-responsiveness and responsiveness while updates are occurring.

Although these arguments appear to conflict with one another, in light of the claim language, the expressed intent of Wanderski's invention is to allow the user to interact with a tree view or any display while updates to that display are in different stages of pendency (column 4, lines 53-57 and column 8, lines 21-23). The user can interact with the tree view while updates are pending (column 8, lines 2-8, *user can concurrently view information in storage devices and retrieve information from these devices*).

In regards to the applicants arguments found above, the Examiner disagrees for the following reasons:

Per argument (a), Wanderski clearly relates to the retrieval of categorized information. Wanderski's invention relates to the display of hierarchically arranged information (column 5, lines 18-20, *"a hierarchical data structure representing a relationship among said plurality of*

objects”). Hierarchically organized information is categorized by its relationship to the hierarchy. Wanderski is teaching the updating of a hierarchy by the addition of files or objects (column 10, lines 4-6) and these files or objects must be retrieved from where they reside and added to the hierarchy.

Per argument (b), Wanderski clearly states that there are numerous means to indicate the retrieval status of pending updates to a file structure (column 9, lines 8-21). The use of alternate icons or fonts are examples of placeholders indicating the retrieval status of data needed to populate portions of categories.

Per argument (c), Wanderski states that there are separate threads to process updates and to present information on a display (column 4, lines 53-57). Although Wanderski does not explicitly state that a second thread is used for the retrieval of data, the processing of update information includes retrieving data (column 8, lines 2-8, *retrieving data off of a storage device such as a CD-ROM*). Wanderski clearly states that one thread is used to handle the presentation of data (i.e. – the graphical user interface) and one thread is used to process updates (i.e. – the retrieval of data for the display).

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordan S Golinkoff whose telephone number is 703-305-8771. The examiner can normally be reached on Monday through Thursday from 8:30 a.m. to 6:00 p.m. and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid can be reached on 703-308-0640. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jordan Golinkoff
Patent Examiner
March 9, 2004

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